



PowerWatch™

Power Management System



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Installing and Configuring PowerWatch Software

Cart PC side Application Installation Process

Installation Process Steps

Installing the PowerWatch software must be done in a specific order for the software to work properly and for the process to continue without error.

Follow these steps in installing the PowerWatch software at Cart PC side. See the appropriate section of this chapter for instructions.

Step	Section of Chapter
1. Install the database and database engine.	<i>Installing the Database</i>
2. Install the PowerWatch software.	<i>Installing the PowerWatch Software</i>
3. Modify the Database settings.	<i>Modifying the Database Settings.</i>

Installing the Database

Installing the Database and database engine

Install the PowerWatch Software Database Engine by following these steps:

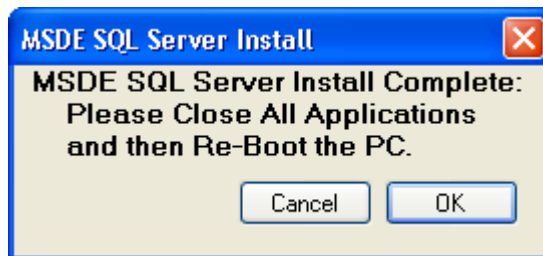
- 1) Run the MSDE2000A.exe application from the installation folder.

- 2) Open MSDERelA folder and run PowerWatch_MSDE_Install.exe.
Installation will start automatically.



Click Ok to continue.

- 3) Completion of MSDE SQL Server install requires a reboot.



Click Ok and Reboot the computer.

- 4) Verify that the SQL service is running by clicking on the MSSQL icon in your task bar.
Refresh the service if not running.

Installing PowerWatch Software

Before You Install the PowerWatch Software, you must install:

1. MSDE database engine or SQL Server.

Installing the PowerWatch Software

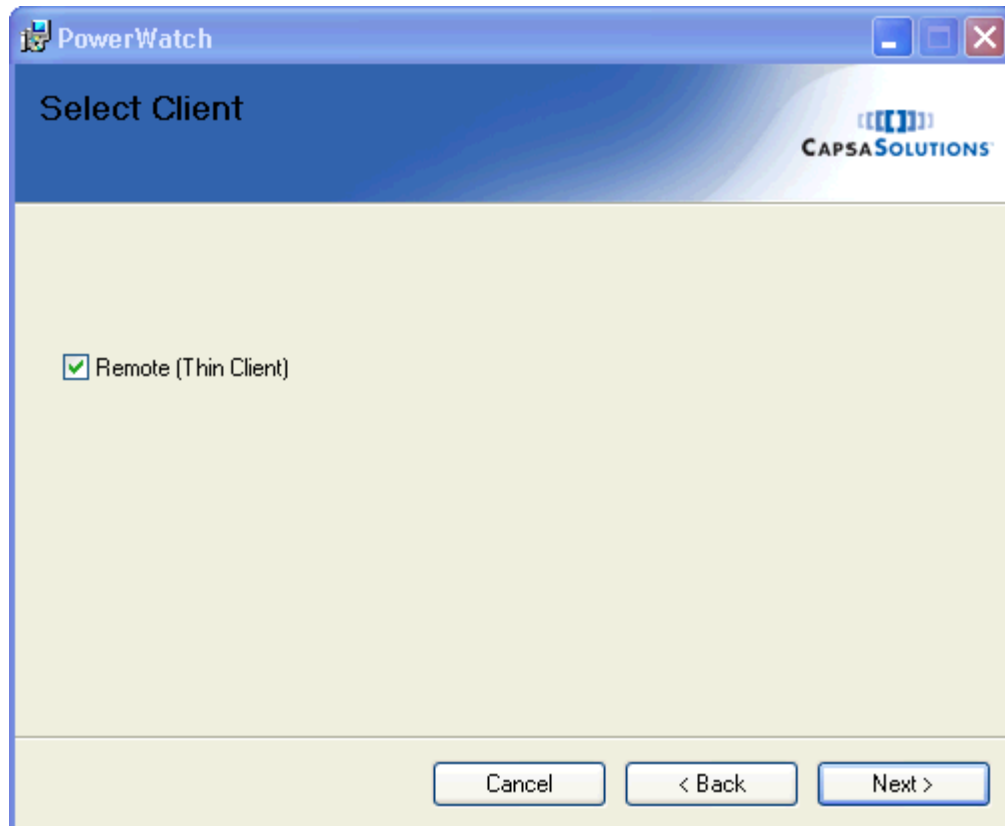
Complete the following procedure to install the PowerWatch software:

1. Run Cart Side PowerWatch Install.msi.
2. Welcome screen will be displayed with two options to select from:
 - Cancel –To cancel the installation.
 - Next – To continue with the installation.



Click on 'Next' button to continue the installation.

3. 'Select Client' window will appear with an option to Check/Uncheck Remote (Thin Client). If Remote (thin client) option is selected then all events and data will be stored in remote or central database. If remote database does not exist or not available then this option can be unchecked and data will be stored in local database only.



Click on 'Next' button to continue the installation.

4. If the checkbox for Remote (Thin Client) is checked, user will be directed to Remote Database Setup screen. User will be asked to enter remote database information. Correct information should be entered for successful installation.

PowerWatch

Remote Database Setup

CAPSA SOLUTIONS

Remote Setup

*Remote PC Name :
RSI-NOD-SQL2K5

*Remote Database Server Name :
GENACIS

*Remote Database UserID :
CAPSA

*Remote Database Password :
CAPSA

Cancel < Back Next >

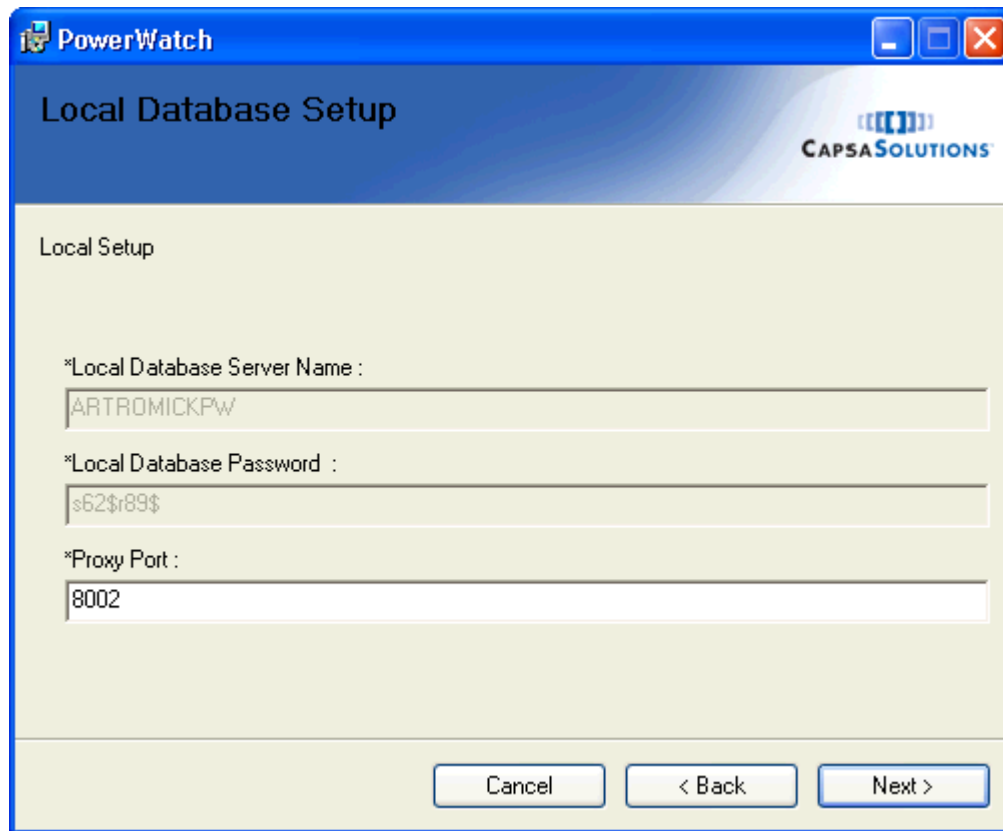
User is required to fill following fields for Remote Setup:

- **Remote PC Name**-Name of the PC on which the Remote Database exists.
- **Remote Database Server Name**- Database server name of the PC on which the Remote database exists.
- **Remote Database User ID** – User Id to login to Remote database.
- **Remote Database Password**- Password to access Remote database.

Click on 'Next' button to continue the installation.

5. Local Database Setup Screen will be displayed

If the checkbox for Remote (Thin Client) is not checked on select client screen, user will be directly taken to Local Database Setup screen.

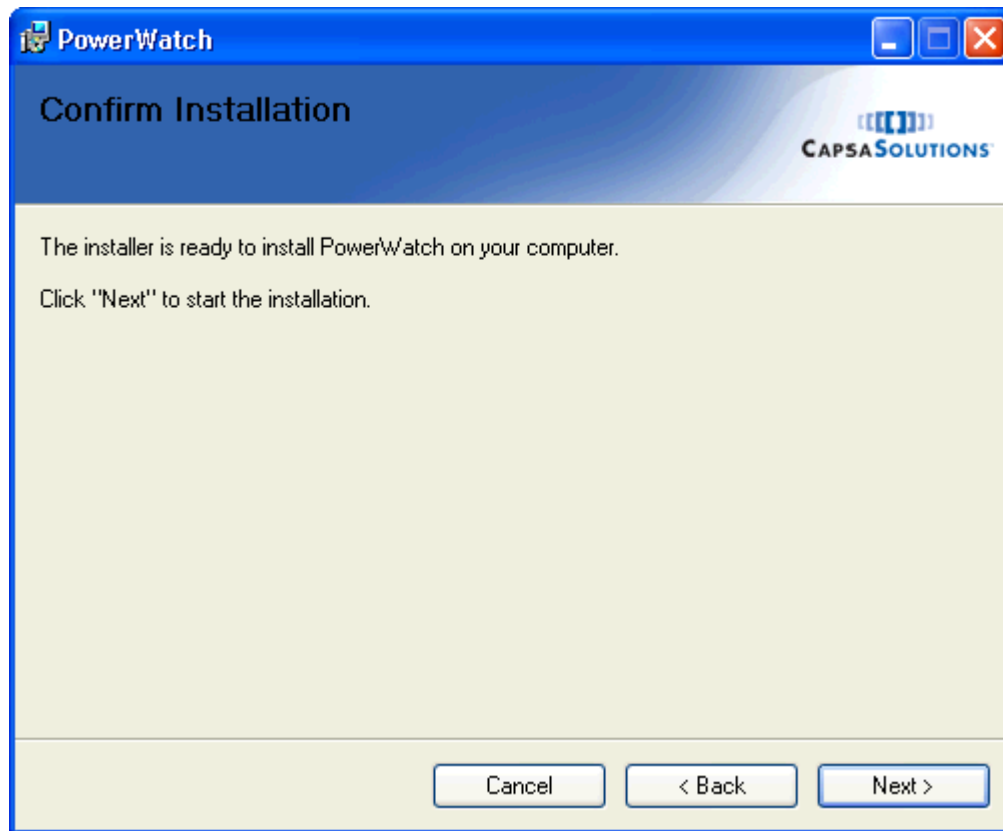


The following fields are displayed for Local Setup:

- **Local Database Server Name**- Database server name of the PC on which the local Database exists.
- **Local Database password**- Password to access local database
- **Proxy Port**- This is the port used by proxy server to communicate with cart.

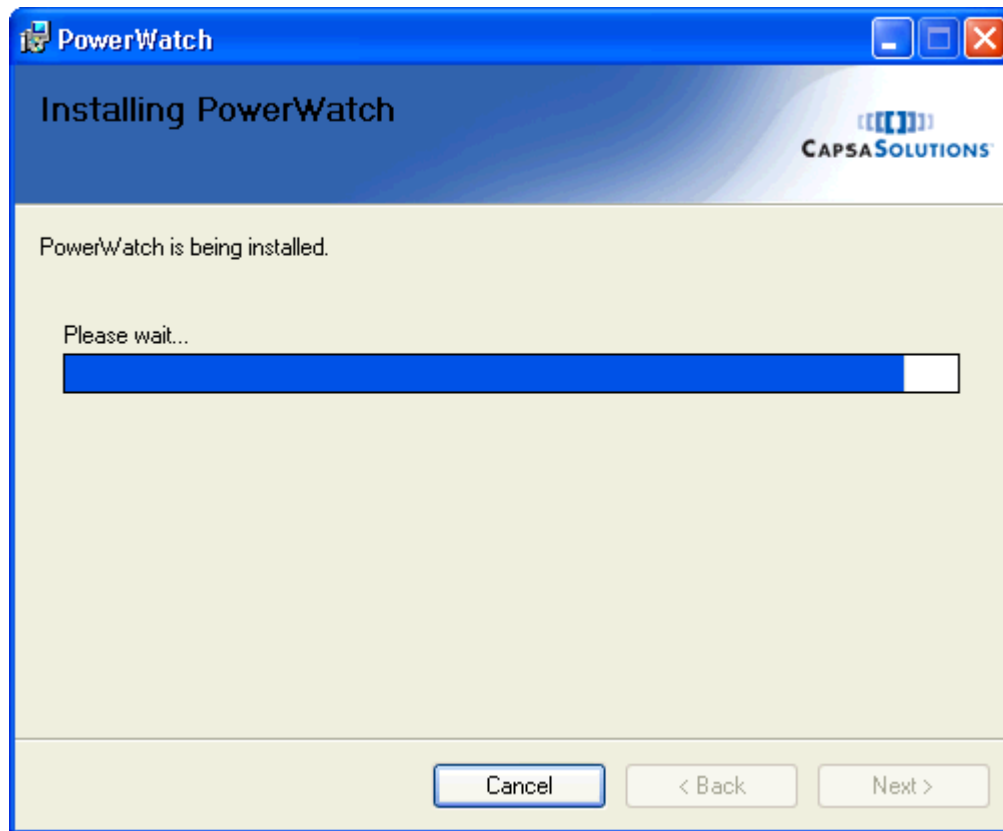
Click on 'Next' button to continue the installation.

6. User is directed to "Confirm Installation" window.

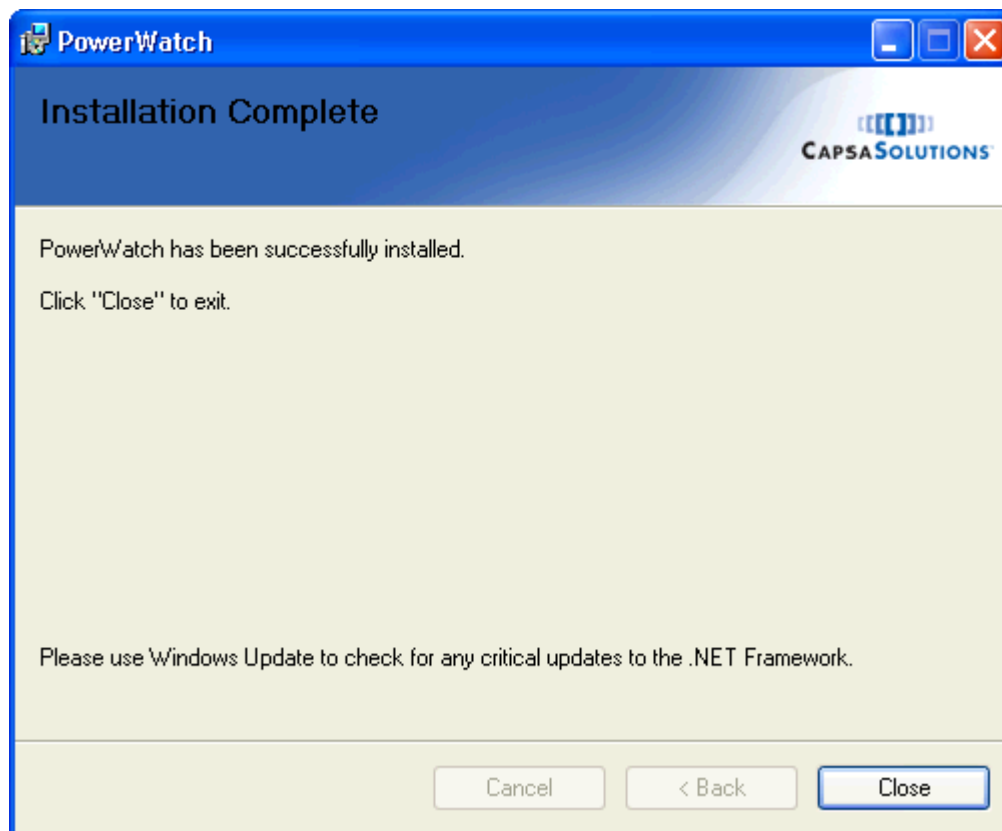


Click on 'Next' button to continue the installation.

7. Once the user confirms the installation and clicks on "Next" button, installation will start. User can see this in the form of progress bar.



8. Application is now installed at preferred location with the given remote database information.
Click close and launch the application from Start menu.
To launch Cart PC side application, click on start>All Programs>PowerWatch PC>PowerWatch



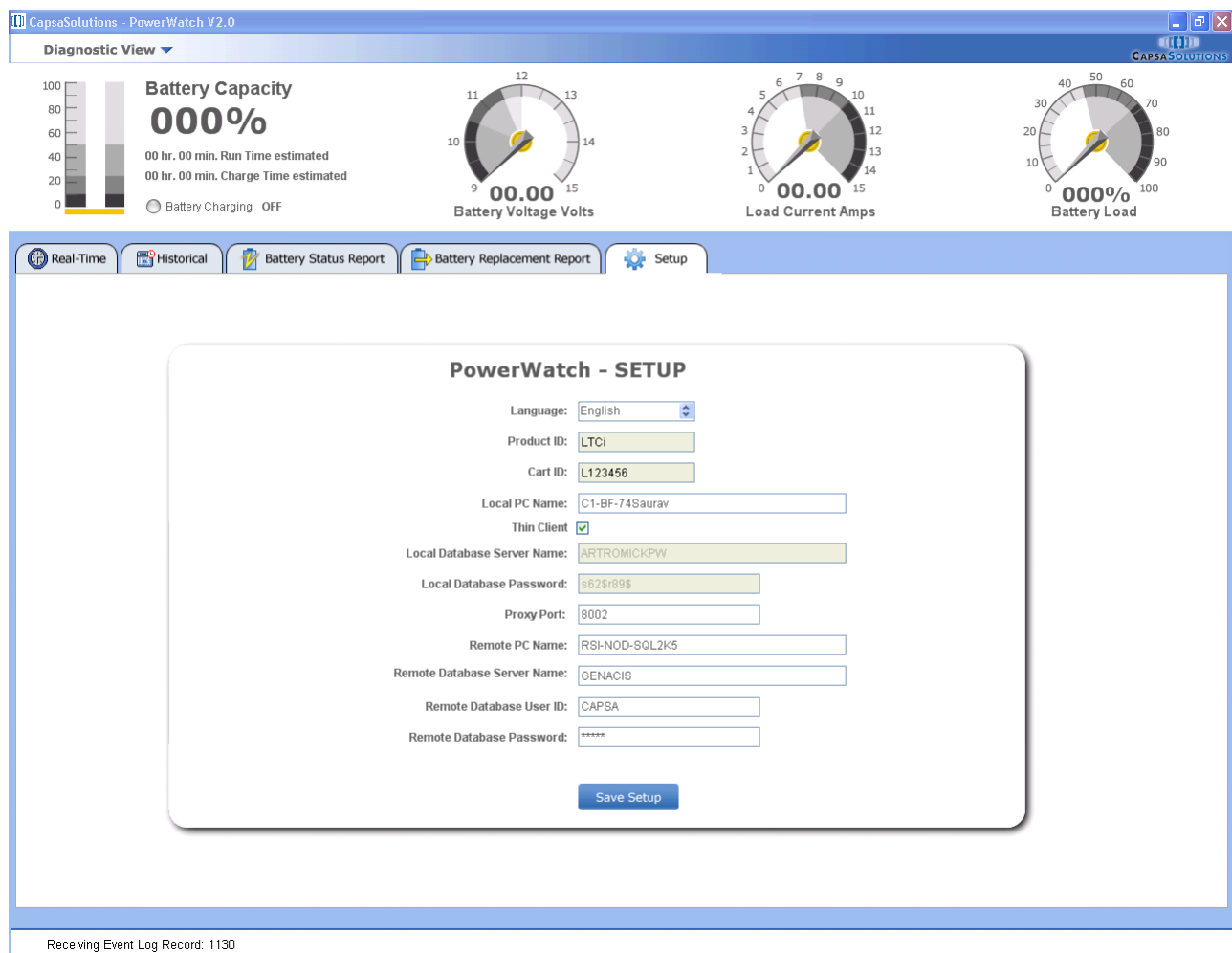
Configuring PC side PowerWatch Software

Configuring the PowerWatch Software

After the initial configuration made by the user at the time of installation user can anytime view and modify the configuration settings using Setup screen.

Application-Setup enables user to modify the settings made at the time of installation depending upon which the data is stored in either local or remote database.

This facilitates user to modify these settings without re-installing the application



PowerWatch Setup Settings

1. The following settings cannot be changed:

- **Product ID**- This is an ID given to each product/cart type. This ID is used to identify family or type of cart.
- **Cart ID**- Unique ID used to identify each Cart in the system.
- **Local database Server Name**- Database server name of the local PC on which the application is running.
- **Local Database Password**-Password to access local database.

2. Make any changes to the following Settings:

- **Language**-Option to select from English, French and Spanish.
- **Local PC Name**-Name of the PC on which the application is running.
- **Proxy Port**- To ensure communication between Local PC (Cart) and Remote Server.
- **Remote PC Name**-Name of the PC on which the Remote Database exists.
- **Remote Database Server Name**- Database server name of the PC on which the Remote Database exists.
- **Remote Database User ID** – User Id to login to Remote database.
- **Remote Database Password**- Password to access Remote database.
- **Thin Client** - Check box to provide user with the ability to select Thin or Thick client regardless of the type of client selected at the time of installation.

Click Save setup to save and implement the changes made to the setup screen.
Restart the application for the changes to take effect.

Server side Application Installation Process

Installation Process Steps

Follow these steps to install PowerWatch software at server side. See the appropriate section of this chapter for instructions.

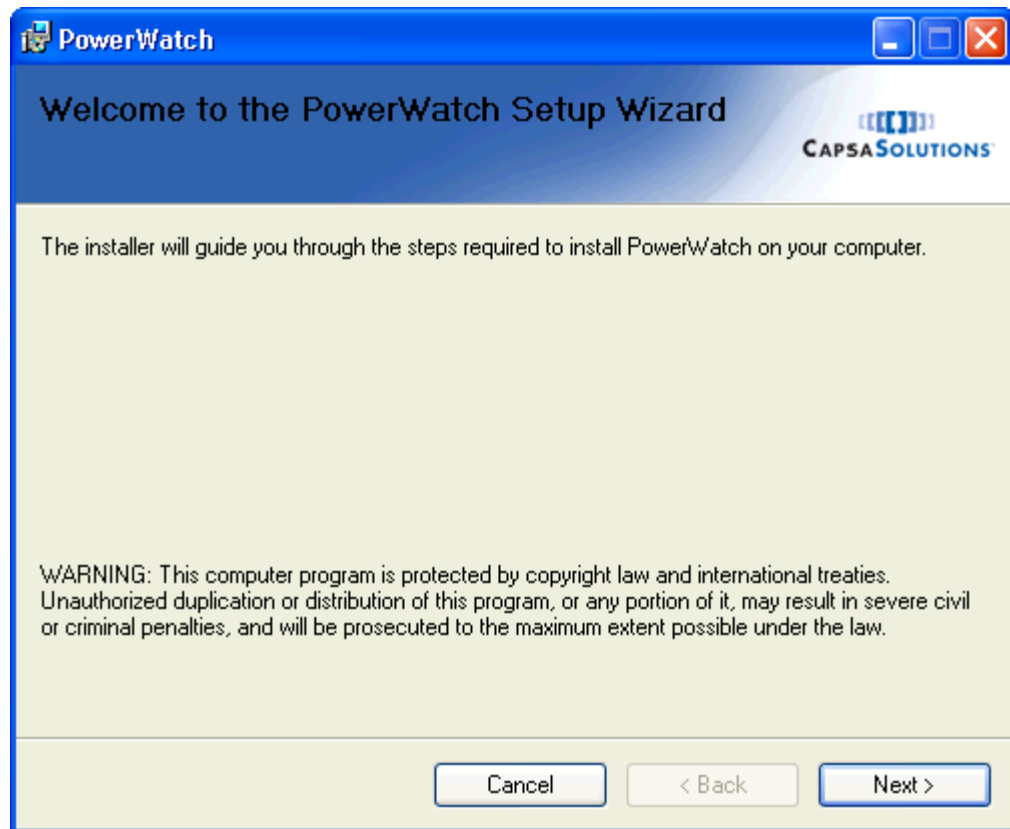
Note: The server side installation requires SQL Server 2005 or better.

Step	Section of Chapter
1. Install the PowerWatch software.	<i>Installing the PowerWatch Software</i>
2. Modify the Database settings.	<i>Modifying the Database Settings.</i>

Installing PowerWatch Software

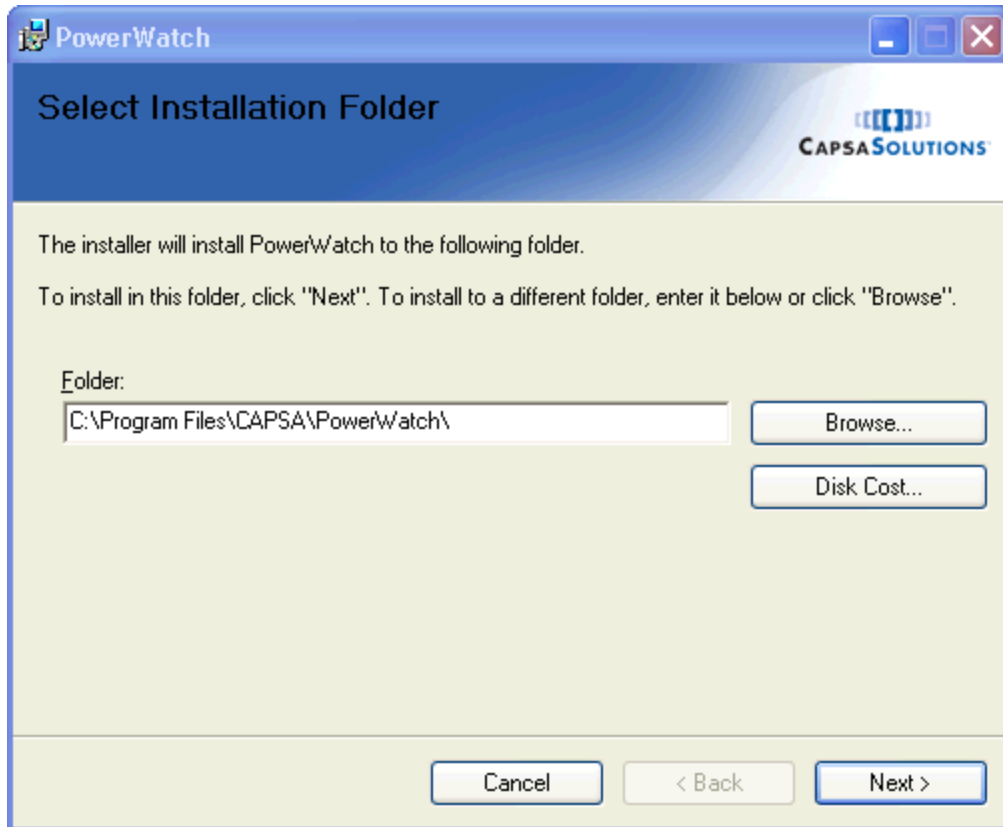
Complete the following procedure to install the PowerWatch software:

1. Open the installation folder.
2. Run Server Side PowerWatch Install.msi located in the install folder.
3. Welcome screen will appear with two options to select from:
 - Cancel –To cancel the installation.
 - Next – To continue with the installation.



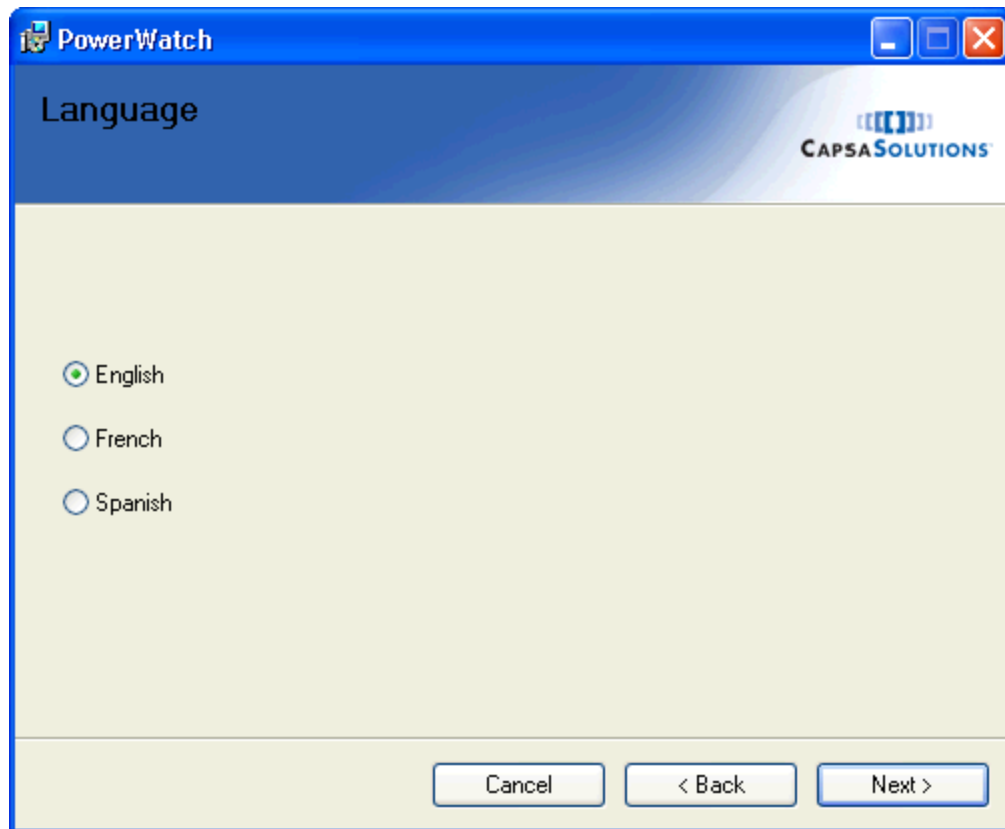
Click on 'Next' button to continue the installation.

4. Select the folder in which you want to install the application. Default path is "C:\Program Files\CAPSA\PowerWatchSetup\



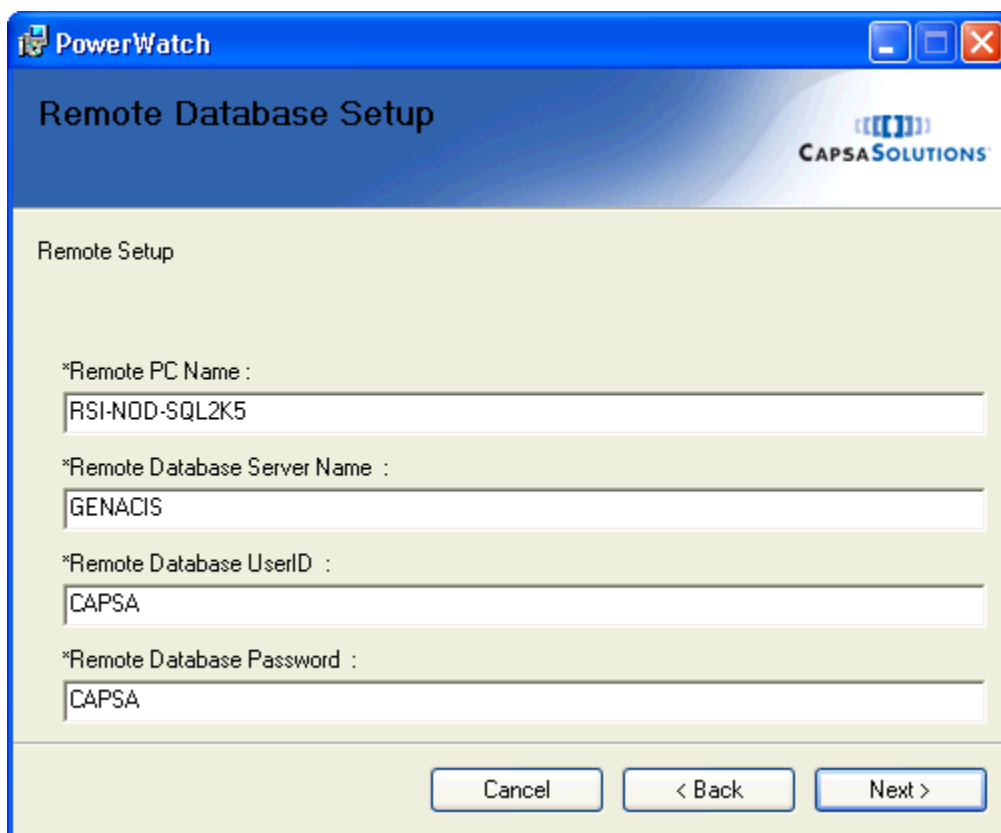
Click on 'Next' button to continue the installation.

5. On Language screen, User can select any language between English, French and Spanish in which the application will run.



Select a language and click on 'Next' button to continue the installation.

6. User will be directed to Remote Database Setup screen.



PowerWatch

Remote Database Setup

Remote Setup

*Remote PC Name :
RSI-NOD-SQL2K5

*Remote Database Server Name :
GENACIS

*Remote Database UserID :
CAPSA

*Remote Database Password :
CAPSA

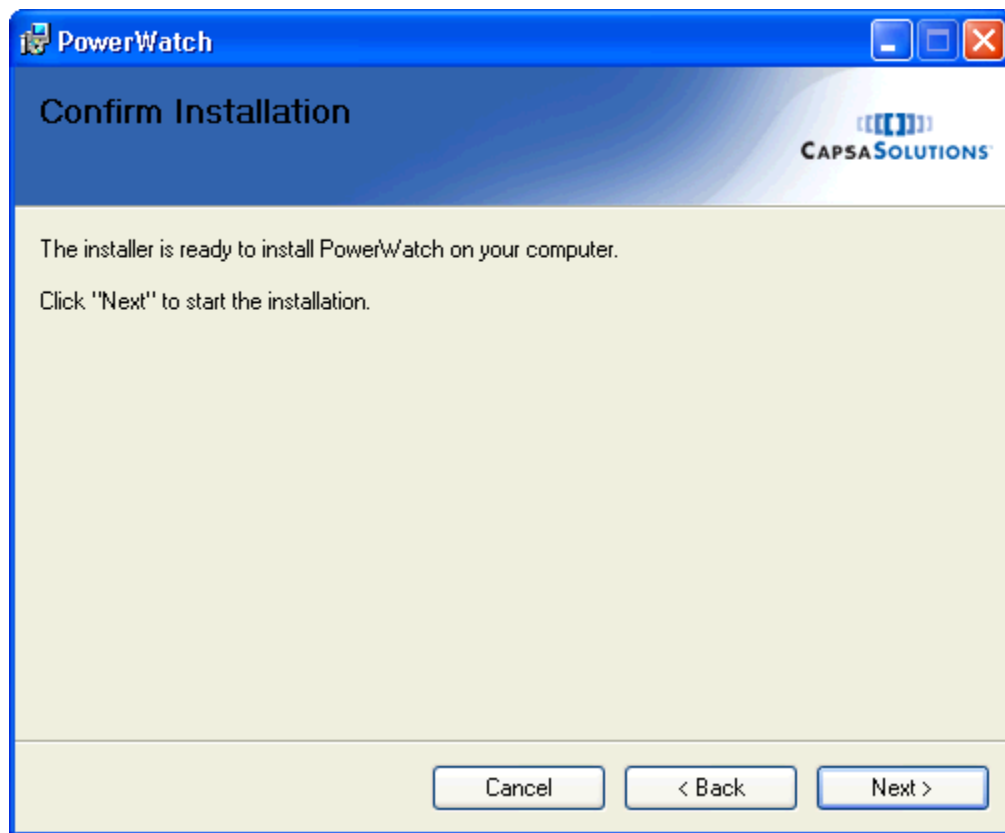
Cancel < Back Next >

User is required to fill following fields for Remote Setup:

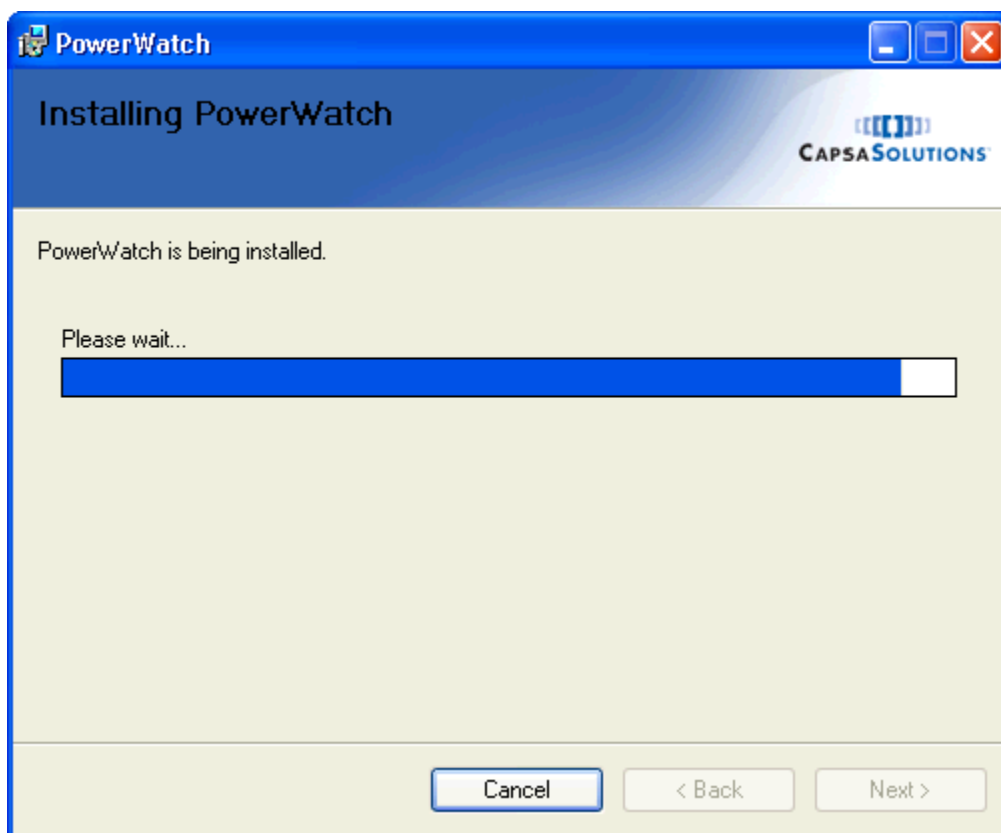
- **Remote PC Name**-Name of the PC on which the Remote Database exists.
- **Remote Database Server Name**- Database server name of the PC on which the Remote Database exists.
- **Remote Database User ID** – User Id to login to Remote database.
- **Remote Database Password**- Password to access Remote database.

Click “Next” button.

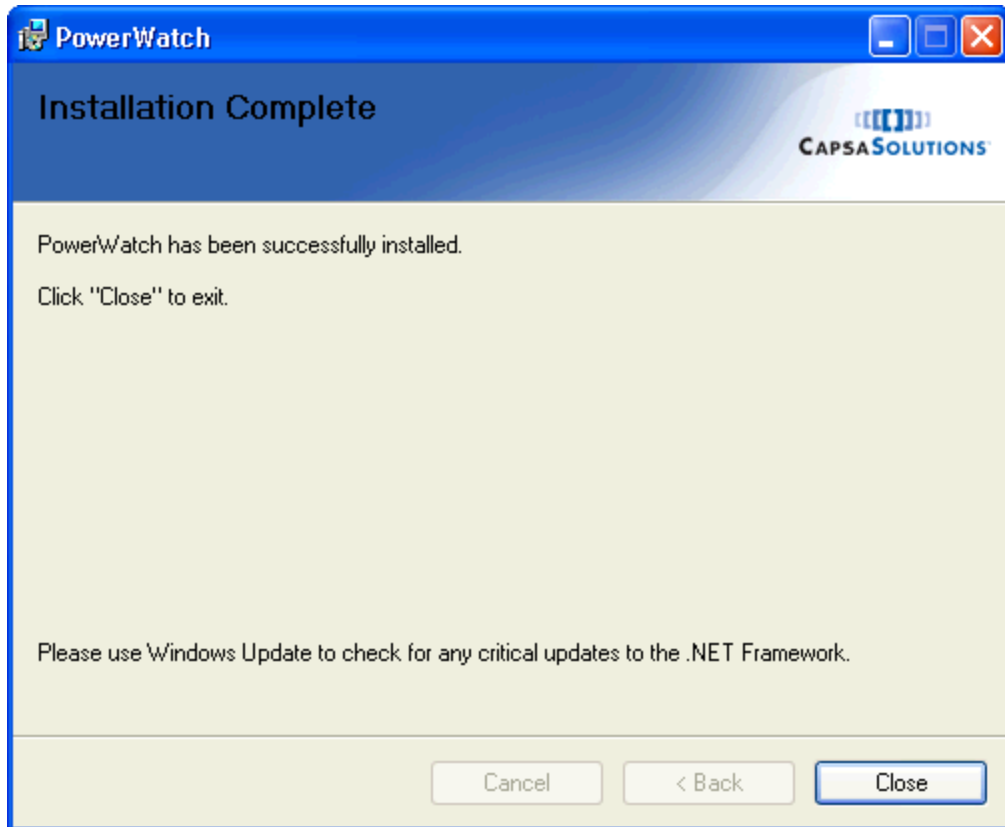
7. User is directed to "Confirm Installation" window.



8. Once the user confirms the installation and clicks on “Next” button, installation will start. User can see this in the form of progress bar.



9. Application is now installed at preferred location with the given remote database information.
Click close and launch the application from Start menu.
To launch server side application, click on start> All Programs> All Programs>PowerWatchServer>PowerWatch



10. The default User Name and Password used to login is both "Admin"



Configuring Server side PowerWatch Software

Configuring the PowerWatch Software

After the initial configuration made by the user at the time of installation user can anytime view and modify the configuration settings using Setup screen.

Application-Setup enables user to modify the settings made at the time of installation depending upon which the data is stored in either local or remote database.

This facilitates user to modify these settings without re-installing the application.

PowerWatch

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Real Time Battery Status Battery Replacement Set Up LogOut

Application Set up

Language: English

Remote Database Server Name: RSI-NOD-SQL2K5\GENACIS

Remote Database User ID: CAPSA

Remote Database Password:

Smtp Client:

Password:

Port: ex: 8080

From: ex: john@capsasolutions.com

To: ex: john@domain.com;smith@domain.com

Subject:

☐ Low Battery : ☐ No Communication :

Save Setup

PowerWatch Setup Settings

Make any changes to the following Settings:

- **Language** - Select any language between English, French and Spanish in which the application will run. Please restart the software for the full changes to take effect.
- **Remote Database Server Name**- Database server name of the PC on which the Remote Database exists.
- **Remote Database User ID** – User Id to login to Remote database.
- **Remote Database Password**- Password to access Remote database.
- **SMTP Client**- Used to send mail from one server to another over the Internet.
- **Password**-Password to access the account from which the mail has to be sent i.e. the password of the ID mentioned in 'From' field.
- **Port**- To ensure communication between Local PC (Cart) and Remote Server.
- **From**-Email Id of the sender.
- **To**-Email ID of the receiver. Multiple receivers are allowed, use comma to separate the IDs
- **Subject**-Subject of the mail. Ex. low battery or Lost Communication.

Click Save setup to save and implement the changes made to the setup screen.
Restart the application for the changes to take effect

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PC Side Application Operation

Introduction to PowerWatch Software

What Is PowerWatch Software?

PowerWatch Software provides the ability to automatically collect Historical and Real-Time Battery Status data from the Cart.

PowerWatch Software collects cart battery charging and discharging trends as well as cart load current trends and presents the data in an easily understandable graphical format which can be viewed on the PC screen and printed in a report format.

PowerWatch software runs in two types of views:

Status View: To assess the “Overall Battery Health” for the Cart.

Diagnostics View: Enables advanced users such as IT Professionals and Technicians to view more technical information about the Cart Battery Status in the form of graphs and charts.

PowerWatch uses following two databases:

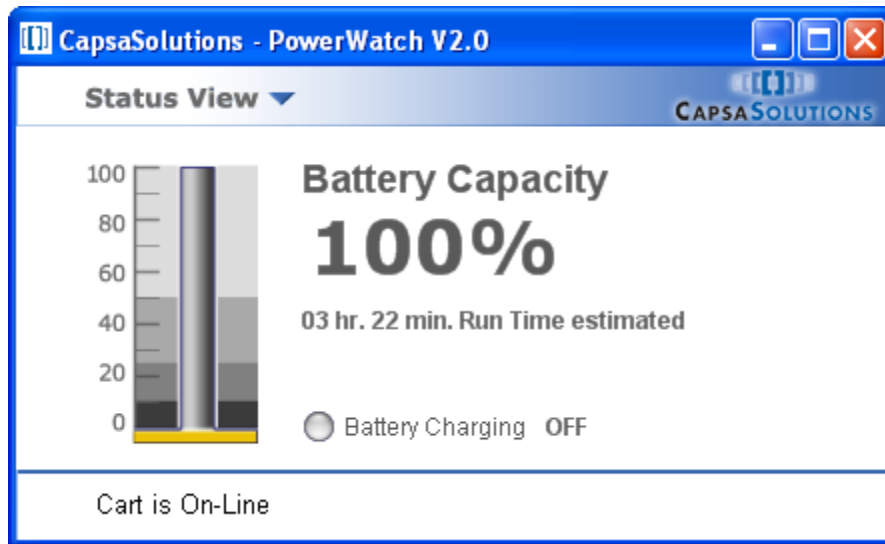
Local database: Database which is local to the PC on the cart.

Server Remote database: Database which stores the data of multiple carts.

A connection is established between Cart and Remote database by synchronization of local database with Server Remote database.

Status view features and functions

Status view is the default view. This is a general view of the “Overall Battery Health” for the Cart. It is an easy-to-read graphical format that gives a common user, such as Nurse etc, a clear indication of the current condition of the Cart battery



Status View provides the following features:

- **Battery Capacity** – Displays the Battery Status in %.
- **Battery Gauge**- Percentage bar displaying Battery Status on the scale of 0 to 100.
- **Charging Status On/Off Switch** – Green indicator with ON signal shows that the cart is plugged in and battery is charging. On the contrary, OFF indicates that the cart is unplugged and battery is depleting.
- **Run time Estimated** - Estimated time left before battery needs recharged.
- **Charge Time Estimated** – Estimated time required to complete battery charge.
- **Diagnostic View Tab** -To switch to diagnostic view.

Diagnostic view features and functions

The “Diagnostic View” is an extension of the “Battery Status Summary View” to provide the advanced user, such as an IT Administrator or a Technician, the technical details about Cart Battery Status. The “Diagnostic View” has a Tab Control to select between viewing “Real-Time” data, “Historical” data, “Battery Status Report”, “Battery Replacement” and “Setup”.



Diagnostic View provides the following features:

- **Summary view features** – Part of Diagnostic view.
 - Battery Voltage Gauge – Displays Battery Voltage in Volts. (9 to 15 V)
 - Load Current Amps Gauge – Displays Load Current in Amps. (0 to 15 Amps)
 - Battery Load Gauge – Displays Percentage Battery Load.

- **Tabbed View Control for-**
 - Real-Time View – Allows user to view real data which is being sent from the Cart.
 - Historical View – Allows user to view data for selected time period by retrieving it from the Central database.
 - Battery Status Report.
 - Battery Replacement Report
 - Setup.
- **Synchronize Database Button** - Used to synchronize SQL Database Table data when changing the Cart Computer. Clicking on this button will synchronize the local database with the remote database.
- **Status view Tab** -To switch to status view.

Battery Status data can be Zoomed In\Out based on a variable time frame. You can also print reports based on the current selected view.

Real time data view features and functions

PowerWatch Software by default runs in the “Real-Time Mode”. (Summary View) Real-Time Battery Status data is presented graphically for Diagnostic View.

PowerWatch establishes a connection with the Serial Port on the Cart automatically. While the software is in the “Real-Time” mode it requests Battery Status Data from the Cart every 10 seconds so the real time data gets updated immediately.

Data is stored in either local or remote database or both depending upon the settings made by the user while installation. For modifying the settings, user can always switch to Setup tab on the screen instead of re-installing the application.



Real-Time Data Measurement

Real time Battery status data is measured under three parameters:

- **Battery Voltage(Volts)**-It displays the battery voltage in Volts in two ways:
 - Battery Voltage Gauge on the top of the screen showing Real Time readings between 9 to 15 Volts.
 - Graphical representation of Battery Voltage Data showing variation of Battery status in volts with respect to time.
- **Load Current(Amps)**– It displays the Load Current in Amps in two ways:
 - Load Current Gauge on the top of the screen showing Real Time readings between 0 to 15 Amps.
 - Graphical representation of Load Current Data showing variation of Load Current data in Amps with respect to time.
- **Battery Load (%)**- It displays the Battery Load in two ways:
 - Battery Gauge on the top of the screen showing Real Time readings in percentage.
 - Graphical representation of Battery Load Data showing variation of Battery Load data in Percentage with respect to time.

Action Buttons

You can select any of the given four options anytime on the Real Time Diagnostic screen to control the streaming of data:

- **Start**- Once the “Real-Time” mode has been terminated manually; user can restart it by pressing the “Start” button.
- **Stop**- Click Stop to manually override the Real Time Data Mode.
- **Print**-Click Print to take print out on the current selected view.
- **Clear**-To clear all the data from the Graphs.

Added Functionality

You can zoom in and out on the Battery Status data based on a variable time frame. For that, just place your mouse cursor on the graph, drag and select the area you want to zoom.

Apart from this, Graphical representation of Real-Time Data enables user to right click on the graph to select any one of the given functionalities:

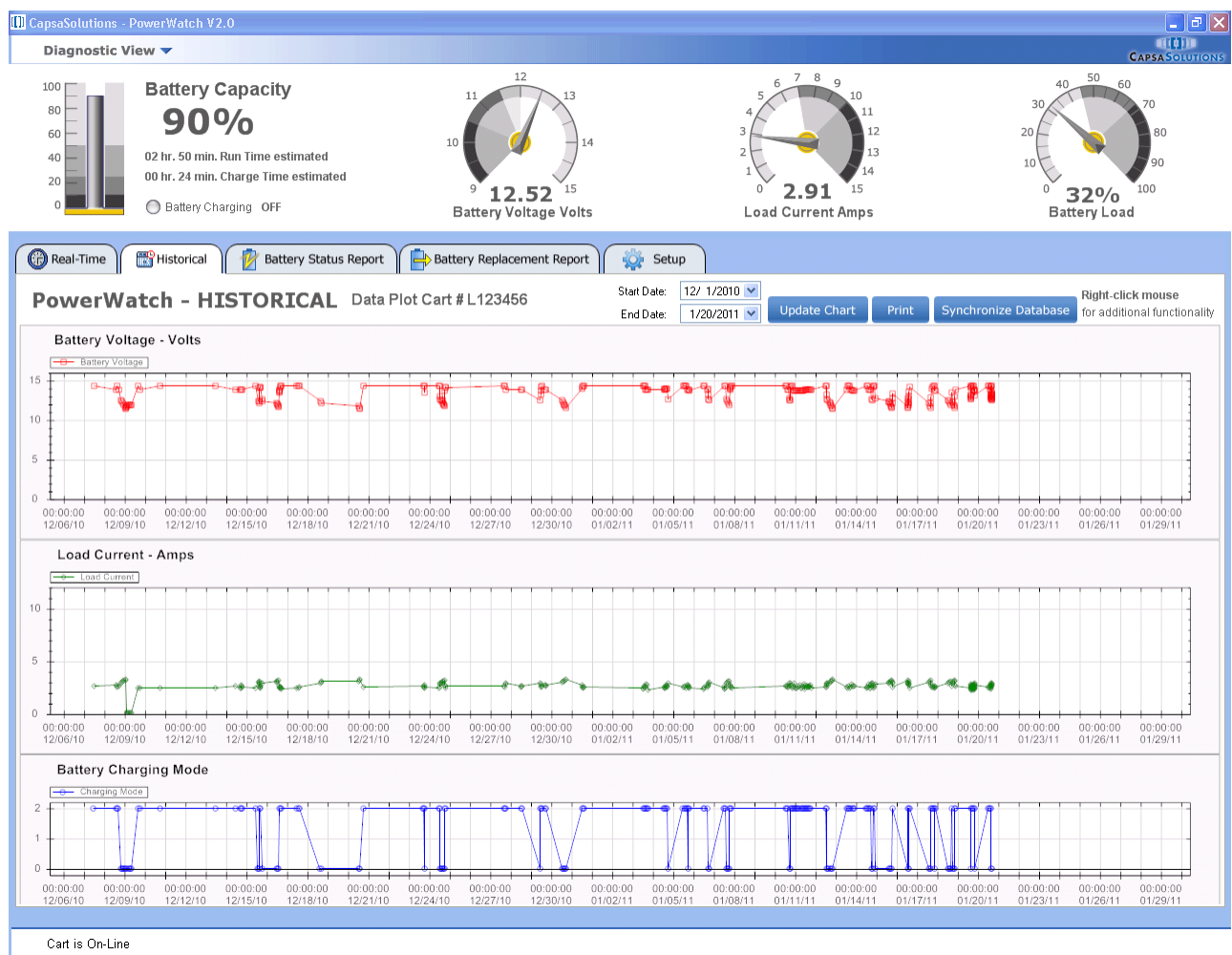
- Show point Values
- Un-zoom
- Undo all Zoom/Pan
- Zoom Extents.

Historical data view features and functions

The “Historical Data” view mode enables you to select start date and end date to view the data that fall within the selected date range. Historical Data is viewed from the SQL database which could be either local or remote.

The Gauges on the top of the window always shows the Real-Time Data readings for Battery Voltage, Load Current and Battery Load.

Historical Data is presented in a comprehensive graphical format.



Historical Data Measurement

Historical Battery status data is measured under three parameters:

- **Battery Voltage (Volts)** - Graphical representation of Battery Voltage Data showing variation of Battery status in Volts with respect to time.
- **Load Current (Amps)** – Graphical representation of Load Current Data showing variation of Load Current data in Amps with respect to time.
- **Battery Load (%)**-Graphical representation of Battery Load Data showing variation of Battery Load data in Percentage with respect to time.

Action Buttons

Following are the actions you can perform when viewing Historical Data mode:

- **Start Date**- Date from which data selection begins. Enter Start Date manually or click on arrow shown next to Date to view and select from the calendar.
- **End Data**- Data is filtered till this date. Enter End Date manually or click on arrow shown next to Date to view and select from the calendar.
- **Update Chart**-This button works like a refresh button. It refreshes the data plotted on the graph.
- **Print**-Click Print to print the current selected view.
- **Synchronize Database Button** - Used to synchronize SQL Database Table data when changing the Cart Computer. Clicking on this button will synchronize the local database with the remote database.

Added Functionality

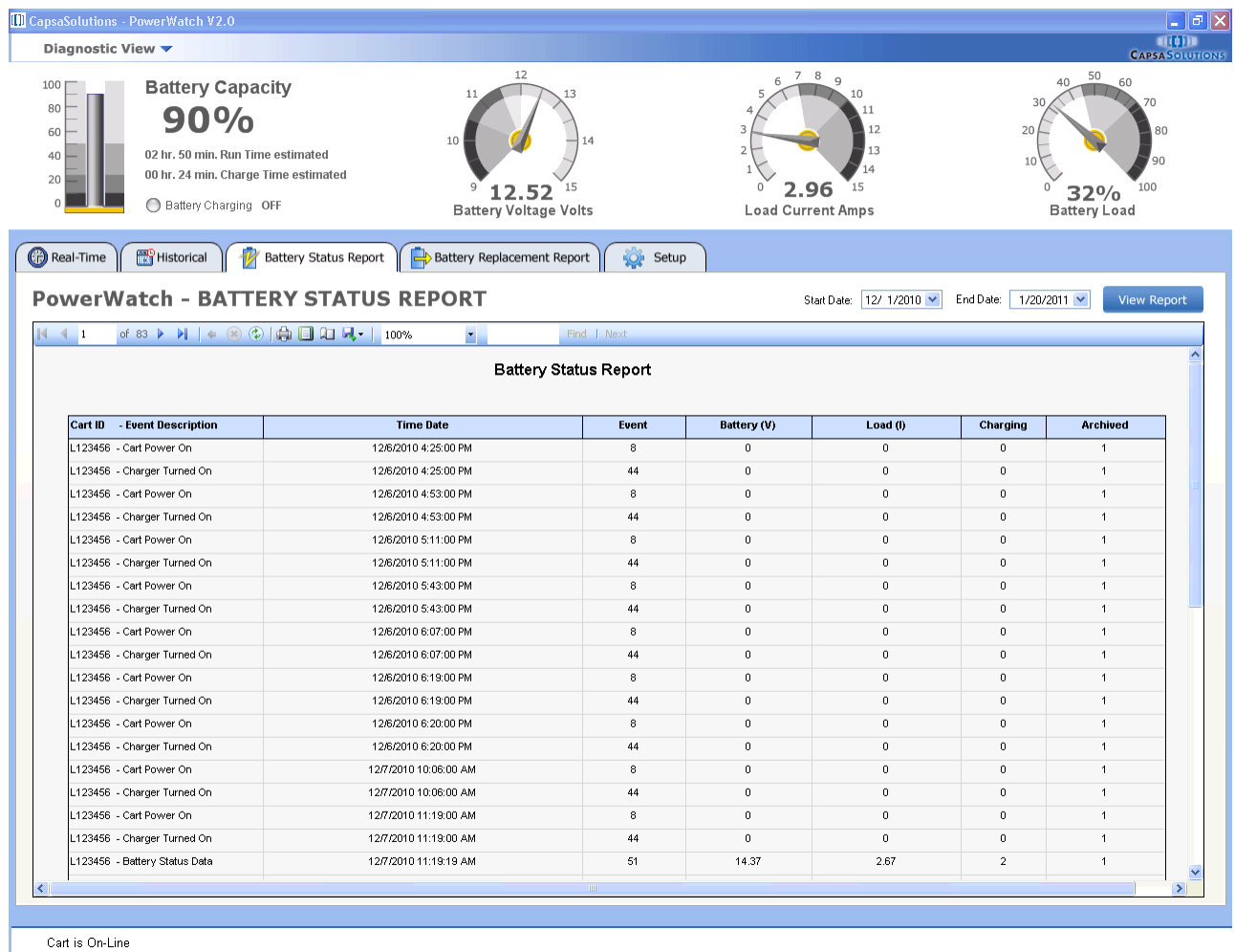
You can zoom in and out on the Battery Status data based on a variable time frame. For that, just place your mouse cursor on the graph, drag and select the area you want to zoom.

Apart from this, Graphical representation of Real Data enables you to right click on the graph to select any one of the given functionalities:

- Show point Values
- Un-zoom
- Undo all Zoom/Pan
- Zoom Extents.

PowerWatch-Battery Status Report

Battery Status Report provides the detailed information related to Events that took place on different carts. These Carts are distinguished using Cart Ids and Events by Event codes.



Battery Status Report includes following fields:

- **CartID** –Unique ID used to identify each Cart in the system.
- **Time Date** – It shows the date and time at which the event took place in the format mm/dd/yyyy hh:mm:ss AM/PM.(Example: 10/09/2008 10:42:56 AM)
- **Event** – Displays the Event code. (Example 8 for Event: Cart Power ON).
- **Battery Voltage** – Displays Battery Voltage in volts ranging from 9 to 15 Volts.

- **Load Current** – Displays Load Current in Amps ranging from 0 to 15 amps.
- **Charging Status**-Displays Charging status of the battery.
0= Off, 1 = Low, 2 = High
- **Archived Status** –Displays the Archived battery Status.
1 = Archived (Data which is already sent to the remote database).
0 = Not Archived (Data which not sent to the remote database).

Action Buttons

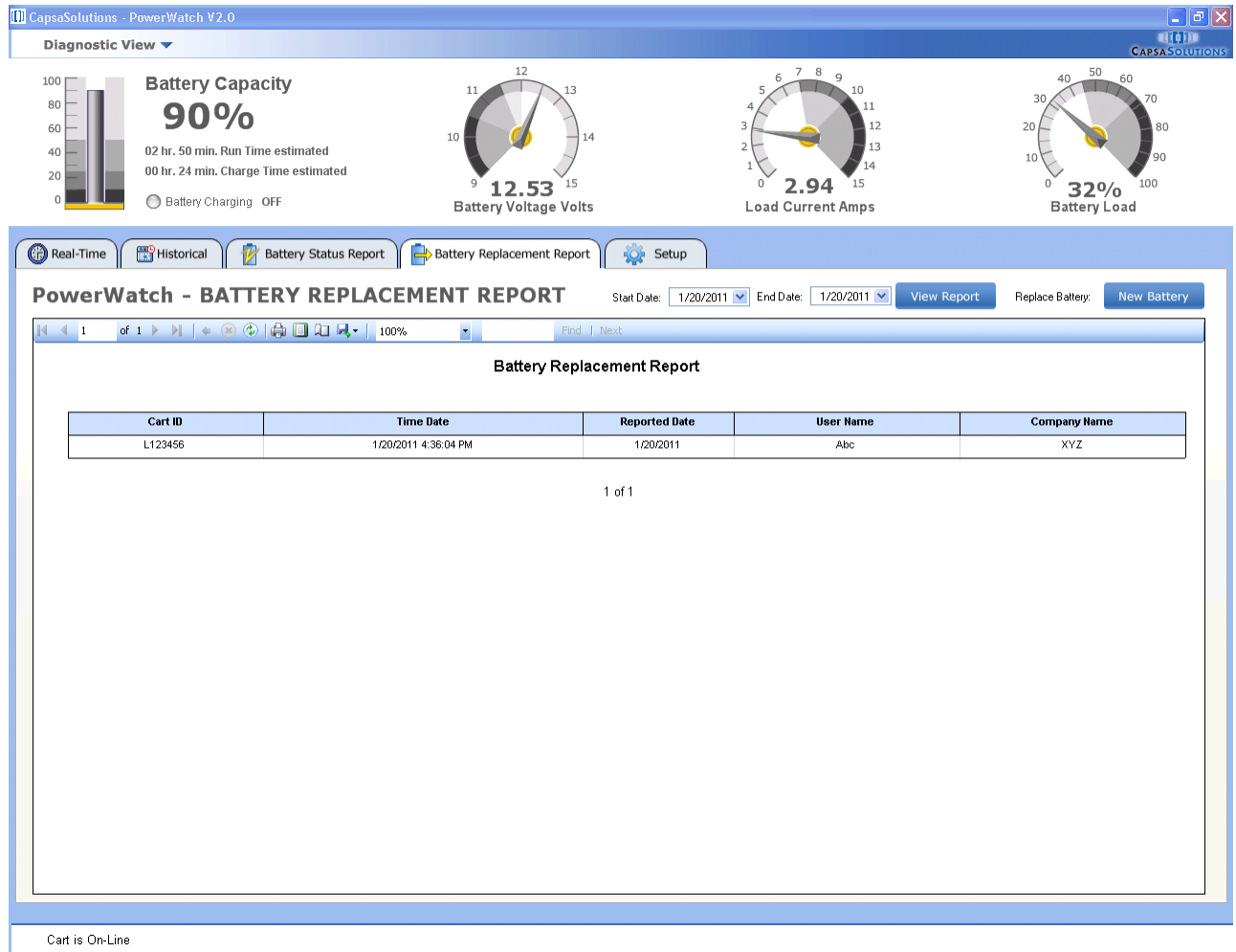
Following are the actions you can perform when viewing Battery Status report:

- **Start Date**- Date from which data selection begins. Enter Start Date manually or click on arrow shown next to Date to view and select from the calendar.
- **End Date**:- Data is filtered till this date. Enter End Date manually or click on arrow shown next to Date to view and select from the calendar.
- **View Report**-This displays the Battery Status Report for the data that falls between the selected date range.
- **Refresh**- This reloads the Battery status Report page by refreshing the data.
- **Print**-Click Print to print the current selected view
- **Print Layout**-To view how the data on the report would be displayed on the print-out. Click Print Layout icon again to return back to the normal Layout.
- **Page Setup**-This enables user to make any changes to the default configuration of the page to be printed. (Example. Size, Orientation etc.)
- **Export**- Reports can be exported in three formats Excel, PDF and Word on the basis of the type of format selected.
- **Page Width**- Enables user to zoom in/out the report on different page widths ranging from 25% to 500%.
- **Find Text**- Finds the entered text on the entire report. “Next” button gets enabled automatically for multiple search results.

PowerWatch-Battery Replacement Report

“Battery Replacement Report provides the battery replacement details of the cart.

Whenever a user replaces a battery, the information for the newly installed battery is necessary to record to keep track of the Battery/Batteries replaced. Battery replacement history will be displayed for the selected date range.



Battery Replacement Report includes following fields:

- **CartID** –Unique ID used to identify each Cart in the system.
- **Time Date** – It shows the date and time at which the battery is replaced in the format mm/dd/yyyy hh:mm:ss AM/PM.(Example: 10/09/2008 10:42:56 AM)
- **Reported Date** –Displays the reporting date in the format mm/dd/yyyy.

- **User Name** – Name of user that changed the battery.
- **Company name** – Name of Company that changed the battery

Action Buttons

Following are the actions you can perform when viewing Battery Replacement report:

- **Start Date**- Date from which data needs to be picked up. Enter Start Date manually or click on arrow shown next to Date to view and select from the calendar.
- **End Date** - Data is filtered till this date. Enter End Date manually or click on arrow shown next to Date to view and select from the calendar.
- **View Report**-This displays the Battery Status Report for the data that falls between the selected date range.
- **New Battery** –On click of this button,
 - Replace battery pop-up appears showing message “Are you sure that you have installed a new battery?”
 - Selecting 'Yes' for the message requires user to fill in the information for User Name and Company name.
 - Selecting 'No' closes the pop-up.
 - Select the date on which the battery is replaced. Current date is set by default.
 - Click 'Ok' to save and 'Cancel' to cancel.
 - Record should get added on the Battery Replacement Report.

The screenshot shows a 'Replace Battery' dialog box with a blue title bar and a close button (X) in the top right corner. The dialog has a light yellow background. It contains three input fields: 'User Name:' with an empty text box, 'Company Name:' with an empty text box, and 'Date Replaced:' with a text box containing '1/20/2011' and a small blue downward arrow. At the bottom right, there are two buttons: 'OK' and 'Cancel'.

- **Viewing multiple pages** - Arrows for First Page, Previous Page, Next page and Last Page enables user to easily switch between multiple pages.
- **Stop rendering**-This button stops rendering any data request like refreshing data.
- **Refresh**- This reloads the Battery status Report page by refreshing the data.

- **Print**-Click Print to print the current selected view
- **Print Layout**: To view how the data on the report would be displayed on the print-out. Click Print Layout icon again to return back to the normal Layout.
- **Page Setup**-This enables user to make any changes to the default configuration of the page to be printed. (Example. Size, Orientation etc.)
- **Export**- Reports can be exported in three formats Excel, PDF and Word on the basis of the type of format selected.
- **Page Width**: Enables user to zoom in/out the report on different page widths ranging from 25% to 500%.
- **Find Text**: Finds the entered text on the entire report. "Next" button gets enabled automatically for multiple search results.

PowerWatch-Setup

Setup tab enables user to modify the settings made at the time of installation without re-installing the application.



PowerWatch Setup Settings

- **Language**-Option to select from English, French and Spanish.
- **Product ID**- This is an ID given to each product/cart type. This ID is used to identify family or type of cart.
- **Cart ID**- Unique ID used to identify each Cart in the system.
- **Local PC Name**-Name of the PC on which the application is running.

- **Local Database Server Name**-Database server name of the local PC on which the application is running.
- **Local Database Password**-Password to access local database.
- **Proxy Port**- To ensure communication between Local PC (Cart) and Remote Server.
- **Remote PC Name**-Name of the PC on which the Remote Database exists.
- **Remote Database Server Name**- Database server name of the PC on which the Remote Database exists.
- **Remote Database User ID** – User Id to login to Remote database.
- **Remote Database Password**- Password to access Remote database.

Action Buttons

- **Thin Client** - Check box to provide user with the ability to select Thin or Thick client regardless of the type of client selected at the time of installation.
- **Save setup**- To save and implement the changes made to the setup screen.

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Server Side Application Operation

Introduction to PowerWatch Software

How does the PowerWatch software work at the Server Side?

The Server side application of PowerWatch software uses the remote database to retrieve Historical and Real-Time Battery Status data of multiple carts and presents the data in an easily understandable format which can be viewed on the PC screen and printed in a report format.

A connection is established between Cart and Remote database by synchronization of local database with Server Remote database.

Logging In

Follow these steps to login to the Server side PowerWatch Application.

Step1: Go to Start>All Programs>PowerwatchServer>PowerWatch

Step2: User Login screen will be displayed. User is required to fill in the User Name and Password field correctly to confirm the authenticity. The default User name and Password used to login is "Admin".



Step3: Please enter valid credentials” message displays, if either User name or Password is incorrect or left blank.



Click on ‘LogOut’ option on top of the application window to log off the application.

Real time data view features and functions

PowerWatch Software by default runs in “Real-Time Mode”.

Real time screen shows information for all the carts connected to the Remote System.

Data is stored in remote database based on the database information given at the time of the installation.

Clicking on any ‘Cart Name’ takes the user to a new window to view detailed real and historical data for that particular cart in an understandable graphical format. (For details please refer to **Real time data view features and functions of PC Side application operation**)

There are two types of views for Real Time mode:

View by Cart- Data arranged according to each cart.

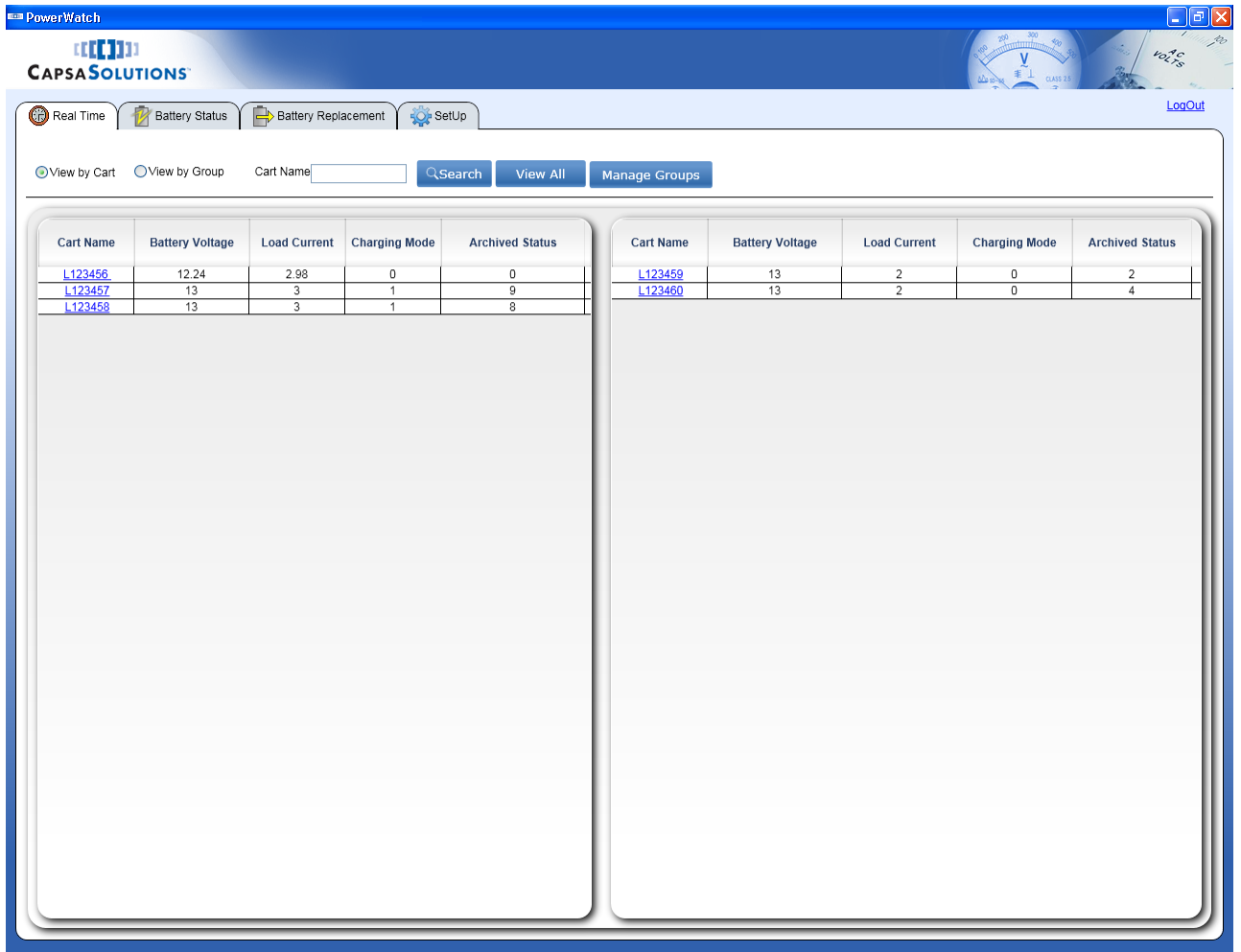
View by Group- Groups of carts created for an easier view.

View by Cart

Select ‘View by Cart’ checkbox on the ‘Real Time’ screen.

This view shows the information for all the carts under following fields:

- **Cart Name-** Unique name used to identify each Cart in the system.
- **Battery Voltage-** Battery Status in Volts.
- **Load current-** Displays Load Current in Amps.
- **Charging Mode-** Displays Charging status of the battery.
0= Off, 1 = Low, 2 = High



View by Group

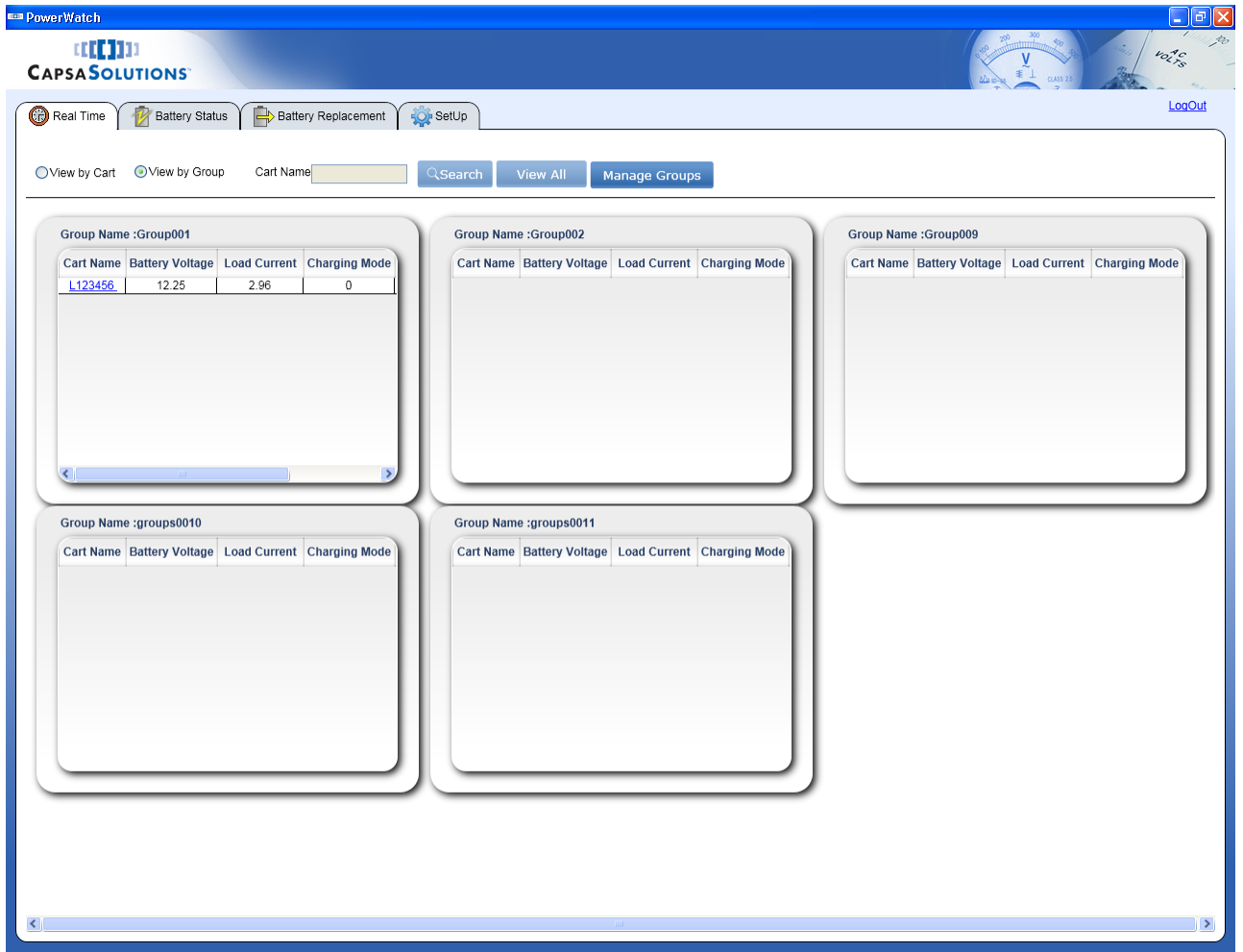
Select 'View by Group' checkbox on the Real Time screen.

All the available groups are displayed with the list of carts assigned to them. No cart can be repeated in more than one group.

User can manage these groups on 'Manage Group' screen.

This view shows the information for groups of carts under following fields:

- **Cart Name-** Unique name used to identify each Cart in the system.
- **Battery Voltage-** Battery Status in Volts.
- **Load current-** Displays Load Current in Amps.
- **Charging Mode-** Displays Charging status of the battery.
0= Off, 1 = Low, 2 = High



Search

Follow these steps to search information of a particular Cart from multiple Cart records

Step1: Go to Start>All Programs>PowerwatchServer>PowerWatch.

Step2: On User Login Screen, enter the correct User Name and Password.
The default User name and Password used to login is "Admin".

Step3: Select 'View by Cart' checkbox on the PowerWatch window in Real Time mode.

Step4: Enter the name of the Cart to be searched in the Cart Name box and click on '**Search**'.
'Search' option supports wild card search.
ex. Entering L12 will show search results for all the Carts containing L12 in their names.

View All

Follow these steps to search information of a Cart from the multiple Cart records

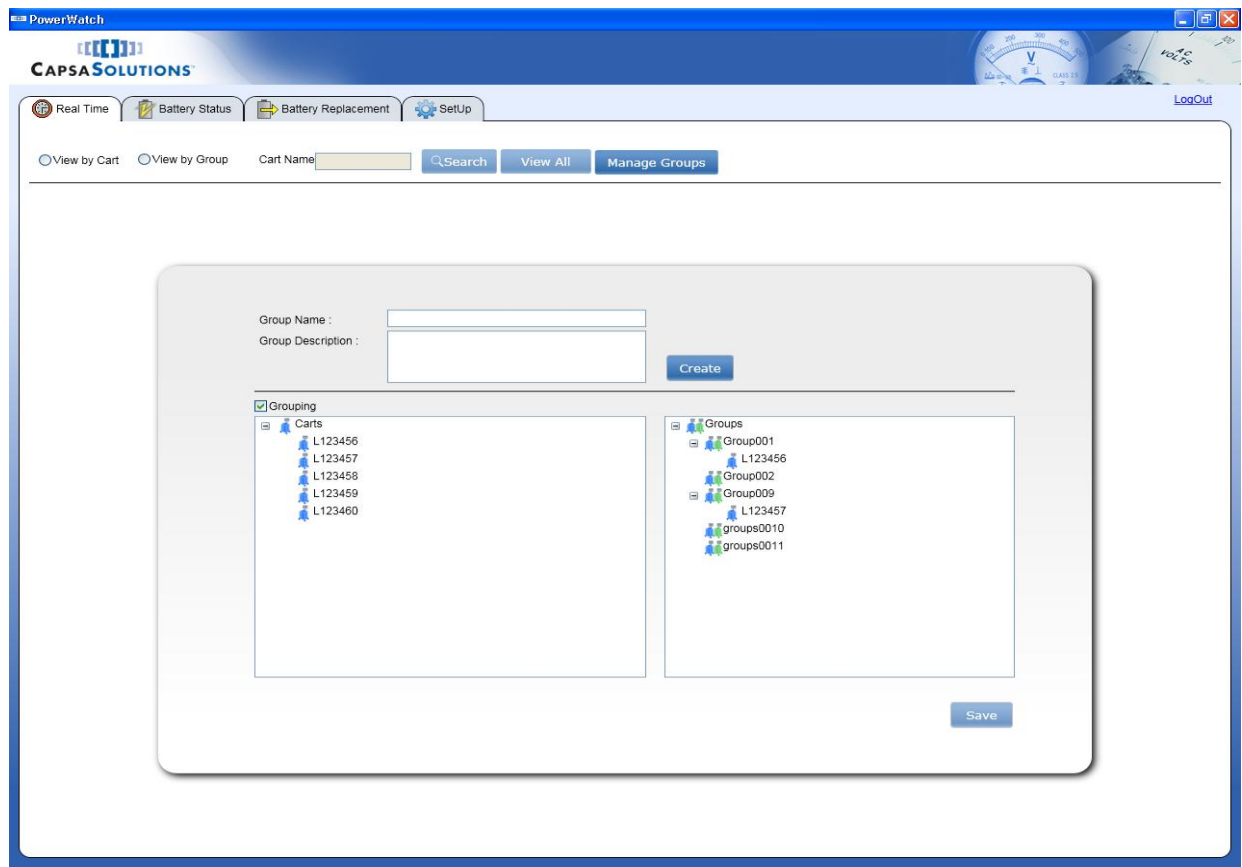
Step1: Go to Start>All Programs>PowerwatchServer>PowerWatch

Step2: On User Login Screen, enter the correct User Name and Password.
The default User name and Password used to login is "Admin".

Step3: Select 'View by Cart' checkbox on the PowerWatch window in Real Time mode.

Step4: Click on 'View All' to view the information of all the carts.

Manage Groups



Manage Group screen enables user to:

Add Groups

Follow these steps to add a new Group:

Step1: Go to Start>All Programs>PowerwatchServer>PowerWatch.

Step2: On User Login Screen, enter the correct User Name and Password.
The default User name and Password used to login is "Admin".

Step3: Click on 'Manage Groups' Button on Real Time Screen.

Step4: In the Group Name field, enter the name of the Group to be added.

Step5: In the Group Description field, enter description of the group to be added.

Step6: Click on 'Create' button to create the group with the Group Name and Description entered in the previous steps

Assign Carts to the Groups

Follow these steps to assign Carts to the Groups:

Step1: Go to Start>All Programs>RemotePowerWatch>RemotePowerWatch.

Step2: On User Login Screen, enter the correct User Name and Password.
The default User name and Password used to login is "Admin".

Step3: Click on 'Manage Groups' Button on Real Time Screen.

Step4: From the list of Carts displayed on the left side of the screen, select the cart which is to be assigned to the group.

Step5: Drag and drop the selected Cart onto the Group to which the cart is to be assigned, from the list of groups available on the Right Side of the screen.
A Cart can be assigned to only one Group at a time.

Step6: Click on 'Save' button to save the changes made to the Manage Groups screen.

Remove Groups

Follow these steps to remove a Group from the list of Groups on Manage Groups screen:

Step1: Go to Start>All Programs>RemotePowerWatch>RemotePowerWatch.

Step2: On User Login Screen, enter the correct User Name and Password.

Step3: Click on 'Manage Groups' Button on Real Time Screen.

Step4: From the list of Groups displayed on the right side of the screen, right click on the group which is to be removed and select 'Remove selected item' option.

Step5: Click on 'Save' button to save the changes made to the Manage Groups screen

Remove Carts

Follow these steps to remove a Cart from the list of Carts and Groups on Manage Groups screen:

Step1: Go to Start>All Programs>RemotePowerWatch>RemotePowerWatch.

Step2: On User Login Screen, enter the correct User Name and Password.

Step3: Click on 'Manage Groups' Button on Real Time Screen.

Step4:

- (i) Removing a cart from the list of Carts: From the Carts displayed on the left side of the screen, right click on the Cart which is to be removed and select 'Remove selected item' option.
- (ii) Removing a cart assigned to a group: From the list of groups on the right side of the screen, search for the Group to which that cart is assigned. Right click on the Cart and select 'Remove selected item' option.

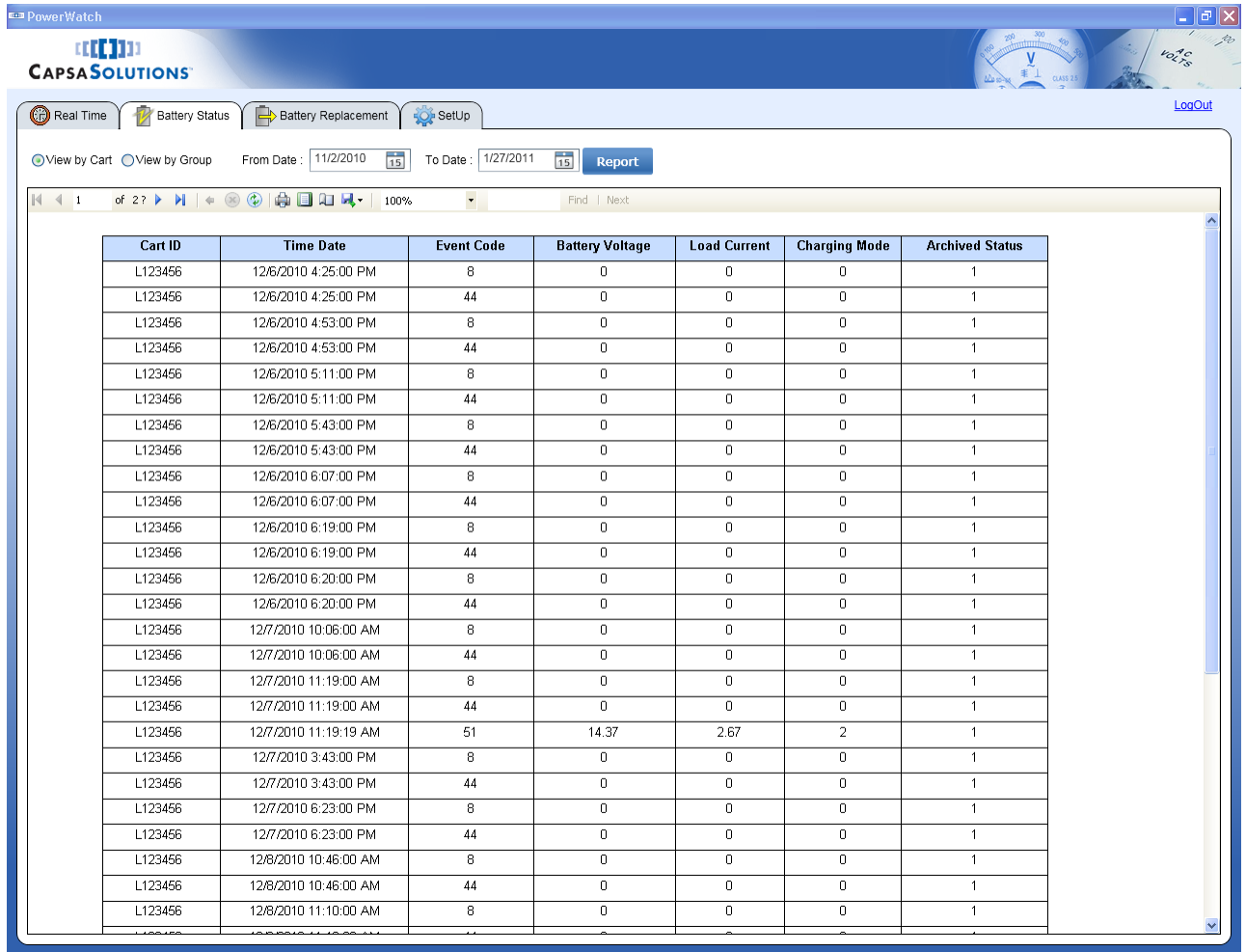
Step5: Click on 'Save' button to save the changes made to the Manage Groups screen

Reports

Battery Status Report

Battery Status Report provides the detailed information related to the battery status of multiple carts which can easily be exported and printed by the user. Carts are distinguished using Cart Ids and Events by Event codes.

View by Cart



Cart ID	Time Date	Event Code	Battery Voltage	Load Current	Charging Mode	Archived Status
L123456	12/6/2010 4:25:00 PM	8	0	0	0	1
L123456	12/6/2010 4:25:00 PM	44	0	0	0	1
L123456	12/6/2010 4:53:00 PM	8	0	0	0	1
L123456	12/6/2010 4:53:00 PM	44	0	0	0	1
L123456	12/6/2010 5:11:00 PM	8	0	0	0	1
L123456	12/6/2010 5:11:00 PM	44	0	0	0	1
L123456	12/6/2010 5:43:00 PM	8	0	0	0	1
L123456	12/6/2010 5:43:00 PM	44	0	0	0	1
L123456	12/6/2010 6:07:00 PM	8	0	0	0	1
L123456	12/6/2010 6:07:00 PM	44	0	0	0	1
L123456	12/6/2010 6:19:00 PM	8	0	0	0	1
L123456	12/6/2010 6:19:00 PM	44	0	0	0	1
L123456	12/6/2010 6:20:00 PM	8	0	0	0	1
L123456	12/6/2010 6:20:00 PM	44	0	0	0	1
L123456	12/7/2010 10:06:00 AM	8	0	0	0	1
L123456	12/7/2010 10:06:00 AM	44	0	0	0	1
L123456	12/7/2010 11:19:00 AM	8	0	0	0	1
L123456	12/7/2010 11:19:00 AM	44	0	0	0	1
L123456	12/7/2010 11:19:19 AM	51	14.37	2.67	2	1
L123456	12/7/2010 3:43:00 PM	8	0	0	0	1
L123456	12/7/2010 3:43:00 PM	44	0	0	0	1
L123456	12/7/2010 6:23:00 PM	8	0	0	0	1
L123456	12/7/2010 6:23:00 PM	44	0	0	0	1
L123456	12/8/2010 10:46:00 AM	8	0	0	0	1
L123456	12/8/2010 10:46:00 AM	44	0	0	0	1
L123456	12/8/2010 11:10:00 AM	8	0	0	0	1

Battery Status Report includes following fields:

- **CartID** –Unique ID used to identify each Cart in the system.
- **Time Date** – It shows the date and time at which the event took place in the format mm/dd/yyyy hh:mm:ss AM/PM.(Example: 10/09/2008 10:42:56 AM)
- **Event Description**– Displays the Event Description. (Example Cart Power ON).
- **Battery Voltage** – Displays Battery Voltage in volts ranging from 9 to 15 Volts.
- **Load Current** – Displays Load Current in Amps ranging from 0 to 15 amps.
- **Charging Mode**– Displays Charging status of the battery.
0= Off, 1 = Low, 2 = High

Action Buttons

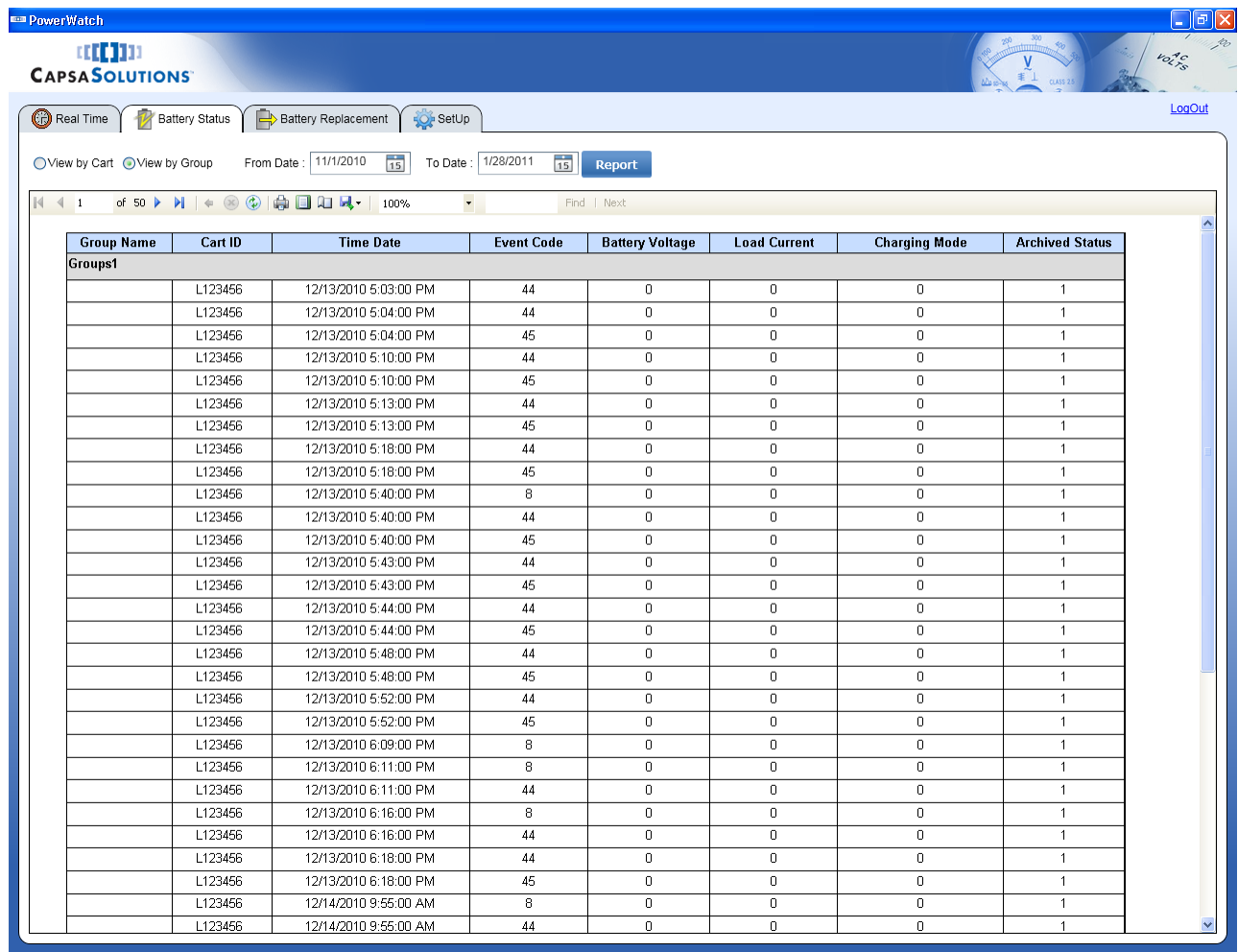
Following actions can be performed on Battery Status report:

- **From Date**- Date from which data selection begins. Enter From Date manually or click on arrow shown next to Date to view and select from the calendar.
- **To Date**:- Data is filtered till this date. Enter To Date manually or click on arrow shown next to Date to view and select from the calendar.
- **Report**-Click on 'Report' button to display the Battery Status Report for the data that falls between the selected date range.
- **Viewing multiple pages**- Arrows for First Page, Previous Page, Next page and Last Page enables user to easily switch between multiple pages.
- **Back to Parent Report**-Back to previous report button is used if main report has sub reports and user is looking at any of sub report. This button can be used to move back to parent report from sub report.
- **Stop rendering**-This button stops rendering any data request like refreshing data.
- **Refresh**- This reloads the Battery status Report page by refreshing the data.
- **Print**-Click Print to print the current selected view
- **Print Layout**-To view how the data on the report would be displayed on the print-out. Click Print Layout icon again to return back to the normal Layout.
- **Page Setup**-This enables user to make any changes to the default configuration of the page to be printed. (Example. Size, Orientation etc.)

- **Export-** Reports can be exported in three formats Excel, PDF and Word on the basis of the type of format selected.
- **Page Width-** Enables user to zoom in/out the report on different page widths ranging from 25% to 500%.
- **Find Text-** Finds the entered text on the entire report. “Next” button gets enabled automatically for multiple search results.

View by Group

Same as View by Cart, except for an additional ‘Group Name’ field which organizes the carts under the Groups they are grouped into for an easy to understand view.



Group Name	Cart ID	Time Date	Event Code	Battery Voltage	Load Current	Charging Mode	Archived Status
Groups1							
	L123456	12/13/2010 5:03:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:04:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:04:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:10:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:10:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:13:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:13:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:18:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:18:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:40:00 PM	8	0	0	0	1
	L123456	12/13/2010 5:40:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:40:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:43:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:43:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:44:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:44:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:48:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:48:00 PM	45	0	0	0	1
	L123456	12/13/2010 5:52:00 PM	44	0	0	0	1
	L123456	12/13/2010 5:52:00 PM	45	0	0	0	1
	L123456	12/13/2010 6:09:00 PM	8	0	0	0	1
	L123456	12/13/2010 6:11:00 PM	8	0	0	0	1
	L123456	12/13/2010 6:11:00 PM	44	0	0	0	1
	L123456	12/13/2010 6:16:00 PM	8	0	0	0	1
	L123456	12/13/2010 6:16:00 PM	44	0	0	0	1
	L123456	12/13/2010 6:18:00 PM	44	0	0	0	1
	L123456	12/13/2010 6:18:00 PM	45	0	0	0	1
	L123456	12/14/2010 9:55:00 AM	8	0	0	0	1
	L123456	12/14/2010 9:55:00 AM	44	0	0	0	1

Battery Replacement Report

Whenever a user replaces a battery, the information for the newly installed battery is necessary to record to keep track of the Battery/Batteries replaced. Battery replacement history will be displayed for the selected date range.

View by Cart

PowerWatch

CAPSA SOLUTIONS

Real Time Battery Status Battery Replacement Setup

View by Cart View by Group From Date: 11/1/2010 To Date: 1/28/2011 Report

1 of 1 100% Find Next

Group	Cart ID	Time Date Stamp	Reported Date	User Name	Company Name	Archived Status
Groups1						
	L123456	1/19/2011 5:38:13 PM	1/19/2011	shruti	rsi	1
	L123456	1/19/2011 5:38:13 PM	1/19/2011	shruti	rsi	0
	L123456	1/20/2011 4:36:04 PM	1/20/2011	Abc	XYZ	1
	L123456	1/20/2011 4:36:04 PM	1/20/2011	Abc	XYZ	0
	L123456	1/24/2011 11:37:20 AM	1/24/2011	B1	B1	1
	L123456	1/24/2011 11:37:20 AM	1/24/2011	B1	B1	0
	L123456	1/24/2011 11:37:44 AM	2/3/2011	B1	B1	1
	L123456	1/24/2011 11:37:44 AM	2/3/2011	B1	B1	0
	L123456	1/24/2011 11:40:29 AM	1/25/2011	B1	B1	1
	L123456	1/24/2011 11:40:29 AM	1/25/2011	B1	B1	0
	L123456	1/27/2011 10:37:03 AM	1/27/2011	11	11	1
	L123456	1/27/2011 10:37:03 AM	1/27/2011	11	11	0
	L123456	1/27/2011 10:37:14 AM	1/27/2011	22	2	1
	L123456	1/27/2011 10:37:14 AM	1/27/2011	22	2	0

Page 1 of 1

Battery Replacement Report includes following fields:

- **CartID** –Unique ID used to identify each Cart in the system.
- **Time Date** – It shows the date and time at which the battery is replaced in the format mm/dd/yyyy hh:mm:ss AM/PM.(Example: 10/09/2008 10:42:56 AM)
- **Reported Date** –Displays the reporting date in the format mm/dd/yyyy.

- **User Name** – Name of user who changed the battery.
- **Company name** – Name of Company which changed the battery

Action Buttons

Following are the actions you can perform when viewing Battery Replacement report:

- **Start Date**- Date from which data needs to be picked up. Enter Start Date manually or click on arrow shown next to Date to view and select from the calendar.
- **End Date** - Data is filtered till this date. Enter End Date manually or click on arrow shown next to Date to view and select from the calendar.
- **View Report**-This displays the Battery Status Report for the data that falls between the selected date range.
- **Viewing multiple pages** - Arrows for First Page, Previous Page, Next page and Last Page enables user to easily switch between multiple pages.
- **Stop rendering**-This button stops rendering any data request like refreshing data.
- **Refresh**- This reloads the Battery status Report page by refreshing the data.
- **Print**-Click Print to print the current selected view
- **Print Layout**: To view how the data on the report would be displayed on the print-out. Click Print Layout icon again to return back to the normal Layout.
- **Page Setup**-This enables user to make any changes to the default configuration of the page to be printed. (Example. Size, Orientation etc.)
- **Export**- Reports can be exported in three formats Excel, PDF and Word on the basis of the type of format selected.
- **Page Width**: Enables user to zoom in/out the report on different page widths ranging from 25% to 500%.
- **Find Text**: Finds the entered text on the entire report. "Next" button gets enabled automatically for multiple search results.

View by Group

Same as View by Cart, except for an additional 'Group Name' field which organizes the carts under the Groups they are grouped into.

PowerWatch

CAPSA SOLUTIONS

Real Time
Battery Status
Battery Replacement
SetUp

[LogOut](#)

View by Cart
View by Group
From Date : 11/1/2010
To Date : 1/31/2011
Report

1 of 1
100%
Find
Next

Group	Cart ID	Time Date Stamp	Reported Date	User Name	Company Name	Archived Status
sdsdsd	L123456	1/30/2011 12:35:34 PM	1/30/2011	rsi	rsystems	0

Page 1 of 1

Setup

Setup tab enables user to modify the settings made at the time of installation without re-installing the application.

PowerWatch

CAPSA SOLUTIONS

Real Time Battery Status Battery Replacement Setup LogOut

Application Set up

Language : English

Remote Database Server Name : RSI-NOD-SQL2K5IGENACIS

Remote Database User ID : CAPSA

Remote Database Password :

Sntp Client :

Password :

Port : ex: 8080

From : ex: john@capsasolutions.com

To : ex: john@domain.com,smith@domain.com

Subject :

☐ Low Battery : ☐ No Communication :

Save Setup

Application Setup Settings

- **Language**-Option to select between English, French and Spanish.
- **Remote Database Server Name**- Database server name of the PC on which the Remote Database exists.
- **Remote Database User ID**-User ID to login to Remote database.
- **Remote Database Password**- Password to access Remote database.

- **SMTP Client**- Used to send mail from one server to another over the Internet.
- **Password**-Password to access the account from which the mail has to be sent i.e. the password of the ID mentioned in 'From' field.
- **Port**- To ensure communication between Local PC (Cart) and Remote Server.
- **From**-Email Id of the sender.
- **To**-Email ID of the receiver. Multiple receivers are allowed, use comma to separate the IDs
- **Subject**-Subject of the mail. Ex. low battery or Lost Communication.

Action Buttons

- **Low Battery**-Select this if a mail needs to be sent automatically when a Cart PC's battery is low.Cart PC name is included in the body of the mail.
- **No communication**- Select this if a mail needs to be sent automatically when loss of communication occurs between Cart PC and Remote System.
- **Save setup**- To save the changes made to the setup screen.

Troubleshooting

Some common issues and basic troubleshooting steps

PC-Side application:

Sno	Module	Issue	Resolution
1	Installation Of Database (MSDE)	When user clicks on "MSDE2000A" it copies the package at default position C:\MSDERelA. In case user selects some other location for this package, it will create an issue while installing PowerWatch_MSDE later.	1) While installing PowerWatch_MSDE, confirm if a folder named "MSDE2000A" exists in C: drive. 2) If in case user has copied this folder at some other location, copy the same in C: drive.
2	Installation of PC application	If user encounters any error message at the end of installation ex: "Setup failed, unable to create local database."	1) Make sure in such a scenario, that system is restarted after completing step 1 above. 2) If installation is unsuccessful, make sure the entries made are correct. For local database, no need to modify the default entries whereas for thin client it has to be in the following format:- <i>Remote PC Name:</i> ex: "D47CV941" <i>Remote Server Name:</i> ex: "SQLEXPRESS" <i>Remote Database UserID:</i> ex: "sa" <i>Remote Database Password:</i> ex: "sa123"

3	Launching of PC application	In case application crashes at some stage during the entire span of software usage and is not able to launch, there is a possibility that “Event log Viewer” is full.	In this case to make sure if service used by the application is running or not, click on start>Run. and Type services.msc. A window will pop up. Look for Artromick Cart Proxy. Right click and restart the service. It will resolve this issue.
		Application might stop running in case 2 softwares running on the same machine uses the same service.	To resolve this and make application running fine, go to control panel> Administrative Tools> click on Event Viewer. A window will pop up, right click on Application from left pane on the page and select “Clear all Events”. This will release the available space and application will be running fine thereafter.
4		If user feels that readings at various gauges seem to be incorrect, there is an option to test this data as well.	In such a scenario, close the other software and restart the service manually as explained in point 3 above. Even then if the issue is not resolved, try resetting the proxy service by double clicking on proxy.bat found at “C:\Program Files\Artromick\ProxyService” Launch the application again after this process.
5	Data related Issues	There could be some issue arising in setup configuration saved at the time of installation or otherwise. Ex: server name, pc name etc	Go to C:\Program Files\Artromick\PowerWatch. Edit “Battery_Setup.xml.” User can calculate as per the formula by considering the data written against that specific product id name.
6	Setup		Make sure the config file “PW_Setup.xml” exists at C:\Program Files\Artromick\PowerWatch. This file is responsible for saving the setup configuration. Open the file and verify the configuration saved into this file.

Server Side Application:

Sno	Module	Issue	Resolution
1	Installation	In case the installation is not successful	Go back and verify the following fields: <i>Remote PC Name:</i> ex: "D47CV941" <i>Remote Server Name:</i> ex: "SQLEXPRESS" <i>Remote Database UserID:</i> ex: "sa" <i>Remote Database Password:</i> ex: "sa123"
2	Application Launching	If user is not able to view the settings as saved during installation.	Make sure "PW_Setup.xml" exists and has all the valid fields entered during installation process.
3	Setup configuration Tab	If user is not able to send email in case of low battery and communication failure events.	1) Check for valid entries for Smt Client, Password, Port, From, To etc. 2) Sometimes, user may find all the entries valid but still sending email fails. It could be due to local network down etc. To verify this, user can check by putting his/her gmail mail id and password. Smt and port for the same is: smtp.gmail.com, 587 respectively. Hence, if things are fine, recipient will receive a mail from user's gmail id.



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